

**Notice of Allowability**

Application No.

09/746,823

Examiner

Khanh Tran

Applicant(s)

BENGTTSSON ET AL.

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2631

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--**

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to the Amendment After Final filed on 01/05/2006.
2. ☒ The allowed claim(s) is/are 10, 12-19, 28 and 30-36, which are renumbered as set forth in this Office action.
3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some\* c) ☐ None of the:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\* Certified copies not received: \_\_\_\_\_.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

**THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5. ☐ CORRECTED DRAWINGS ( as "replacement sheets") must be submitted.
- (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review ( PTO-948) attached
- 1) ☐ hereto or 2) ☐ to Paper No./Mail Date \_\_\_\_\_.
- (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date \_\_\_\_\_.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

**Attachment(s)**

- |   |  |
|---|--|
| 1. <input type="checkbox"/> Notice of References Cited (PTO-892)  | 5. <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)            |
| 2. <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                | 6. <input type="checkbox"/> Interview Summary (PTO-413),<br>Paper No./Mail Date _____. |
| 3. <input type="checkbox"/> Information Disclosure Statements (PTO-1449 or PTO/SB/08),<br>Paper No./Mail Date _____ | 7. <input type="checkbox"/> Examiner's Amendment/Comment                               |
| 4. <input type="checkbox"/> Examiner's Comment Regarding Requirement for Deposit<br>of Biological Material          | 8. <input checked="" type="checkbox"/> Examiner's Statement of Reasons for Allowance   |
|   | 9. <input type="checkbox"/> Other _____.   |

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1. The Amendment After Final filed on 01/05/2006 has been entered. Claims 10, 12-19, 28 and 30-36 are pending in this Office action.

2. Claims have been renumbered as shown below, respectively:

claim 10 renumbered as claim 1;

claim 12 renumbered as claim 2;

claims 16-19 renumbered as claims 3-6;

claim 13 renumbered as claim 7;

claim 14 renumbered as claim 8;

claim 15 renumbered as claim 9;

claim 28 renumbered as claim 10;

claim 30 renumbered as claim 11;

claims 34-36 renumbered as claim 12-14;

claims 31-33 renumbered as claims 15-17.

### ***Response to Arguments***

3. Applicant's arguments, see Applicants' Remarks, filed on 01/05/2006, with respect to claims 1, 3-9, 20, 22-27, 37 and 38 have been fully considered and are persuasive. The rejection of claims 1, 3-9, 20, 22-27, 37 and 38 has been withdrawn

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because Applicants have cancelled all rejected claims. The remaining claims 10, 12-19, 28 and 30-36 are in condition for allowance.

### ***Reasons for Allowance***

The following is an examiner's statement of reasons for allowance:

4. Claims 10, 12 and 16-19 are allowed.

Regarding claim 10, claim is allowable over cited prior art because the cited references, taken individually or in combination, fail to disclose the unique distinct features "*an amplitude tracking subsystem that is responsive to the quadrature modulator to produce an amplitude signal that is responsive to amplitude changes in the modulated signal and that is independent of phase changes in the modulated signal.*

The closest prior art of record, Perrett et al. (US 6,018,275) disclosing phase locked loop with down-conversion in feedback path, either singularly or in combination, fail to anticipate or render the above underlined limitations obvious.

5. Claim 13 is allowed.

Regarding claim 13, claim is allowable over cited prior art because the cited references, taken individually or in combination, fail to disclose the unique distinct features "*an amplitude tracking subsystem that is responsive to the quadrature modulator to produce an amplitude signal that is responsive to amplitude changes in the modulated signal and that is independent of phase changes in the modulated signal.*

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..." and "wherein the automatic gain control subsystem further comprises: a first envelope detector that is responsive to the phase locked loop; a second envelope detector that is responsive to the amplifier; and a comparator that is responsive to the first and second envelope detectors to produce the amplitude signal". The closest prior art of record, Perrett et al. (US 6,018,275) disclosing phase locked loop with down-conversion in feedback path, either singularly or in combination, fail to anticipate or render the above underlined limitations obvious.

6. Claim 14 is allowed.

Regarding claim 14, claim is allowable over cited prior art because the cited references, taken individually or in combination, fail to disclose the unique distinct features "an amplitude tracking subsystem that is responsive to the quadrature modulator to produce an amplitude signal that is responsive to amplitude changes in the modulated signal and that is independent of phase changes in the modulated signal ..." and "wherein the automatic gain control subsystem further comprises: a first envelope detector that is responsive to the phase locked loop; a second envelope detector that is responsive to the amplifier; and a comparator that is responsive to the first and second envelope detectors to produce the amplitude signal". The closest prior art of record, Perrett et al. (US 6,018,275) disclosing phase locked loop with down-conversion in feedback path, either singularly or in combination, fail to anticipate or render the above underlined limitations obvious.

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## 7. Claim 15 is allowed.

Regarding claim 15, claim is allowable over cited prior art because the cited references, taken individually or in combination, fail to disclose the unique distinct features "an amplitude tracking subsystem that is responsive to the quadrature modulator to produce an amplitude signal that is responsive to amplitude changes in the modulated signal and that is independent of phase changes in the modulated signal" and "wherein the amplitude tracking subsystem further comprises: an envelope detector that is responsive to the modulated signal to produce the amplitude signal". The closest prior art of record, Perrett et al. (US 6,018,275) disclosing phase locked loop with down-conversion in feedback path, either singularly or in combination, fail to anticipate or render the above underlined limitations obvious.

## 8. Claims 28, 30 and 34-36 are allowed.

Regarding claim 28, claim is allowable over cited prior art because the cited references, taken individually or in combination, fail to disclose the unique distinct features "producing an amplitude signal from the modulated signal that is responsive to amplitude changes in the modulated signal and that is independent of phase changes in the modulated signal". The closest prior art of record, Perrett et al. (US 6,018,275) disclosing phase locked loop with down-conversion in feedback path, either singularly or in combination, fail to anticipate or render the above underlined limitations obvious.

## 9. Claim 31 is allowed.

Regarding claim 31, claim is allowable over cited prior art because the cited references, taken individually or in combination, fail to disclose the unique distinct features "producing an amplitude signal from the modulated signal that is responsive to amplitude changes in the modulated signal and that is independent of phase changes in the modulated signal" and "wherein the producing an amplitude signal from the modulated signal comprises automatic gain controlling the modulated signal to produce the amplitude signal; and wherein the automatic gain controlling comprises: envelope detecting the modulated signal; envelope detecting a signal in the phase locked loop; and comparing the envelope detected modulated signal and the envelope detected signal in the phase locked loop to produce the amplitude signal". The closest prior art of record, Perrett et al. (US 6,018,275) disclosing phase locked loop with down-conversion in feedback path, either singularly or in combination, fail to anticipate or render the above underlined limitations obvious.

10. Claim 32 is allowed.

Regarding claim 32, claim is allowable over cited prior art because the cited references, taken individually or in combination, fail to disclose the unique distinct features "producing an amplitude signal from the modulated signal that is responsive to amplitude changes in the modulated signal and that is independent of phase changes in the modulated signal" and "wherein the producing an amplitude signal from the modulated signal comprises automatic gain controlling the modulated signal to produce the amplitude signal; and wherein the automatic gain controlling comprises: envelope

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detecting the modulated signal; envelope detecting the amplified phase signal; and comparing the envelope detected modulated signal and the envelope detected signal in the phase locked loop to produce the amplitude signal". The closest prior art of record, Perrett et al. (US 6,018,275) disclosing phase locked loop with down-conversion in feedback path, either singularly or in combination, fail to anticipate or render the above underlined limitations obvious.

11. Claim 33 is allowed.

Regarding claim 33, claim is allowable over cited prior art because the cited references, taken individually or in combination, fail to disclose the unique distinct features "producing an amplitude signal from the modulated signal that is responsive to amplitude changes in the modulated signal and that is independent of phase changes in the modulated signal" and "wherein the producing an amplitude signal from the modulated signal comprises envelope detecting the modulated signal to produce the amplitude signal". The closest prior art of record, Perrett et al. (US 6,018,275) disclosing phase locked loop with down-conversion in feedback path, either singularly or in combination, fail to anticipate or render the above underlined limitations obvious.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

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**Conclusion**

12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Khanh Tran whose telephone number is 571-272-3007. The examiner can normally be reached on Monday - Friday from 08:00 AM - 05:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mohammad Ghayour can be reached on 571-272-3021. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

KCT

*Khanhcong Tran*

02/10/2006

Examiner KHANH TRAN